BRUHATH BANGALORE MAHANAGARA PALIKE

Rajarajeshwari Nagar Zone.

DETAILED ESTIMATE FOR PUBLIC WORKS

Name of the work : Providing high intensity illumination to Ayyappa temple junction, Sahithya koota junction, BEL circle U-turn, Muthyala nagara junction, BFW junction and Rajagopal nagar circle of ward No-16 Jallahalli, RR Nagar Zone.

Rs. 11,00,000/-

Sl. No	Page no. & item no	Description	Unit	Qty	Rate	Amt(Rs)
		PART-A, PWD ELECTRICAL SR-2019-20,Civil SoR-2018-19				
1	6/2.4	KSRB 2-2 : Earthwork excavation by manual means for foundation of buildings, water supply and sanitary lines and electrical conduits etc, either in pits or in trenches 1.5m and above in width, in soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications. KSRB 2-2.2 : -d o - in hard soil. No. KBS 2.1 (b) / 2.3.5 (0.8*0.8*1.2) Mtr Per Foundation for Octagonal pole	Cum	3.07	449.00	1379.33
2	14/4.11	KSRB 4.2.2 : Providing and laying in position reinforced cement Cum concrete of Design Mix M20 with OPC @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregtes @ 0.460 cum, with super plasticisers @ 3 liters confirming to IS 9103-1999 reafirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls, return walls, walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6	Cum	2.70	5659.00	15301.94
3	13/4.3	KSRB 4-1.3 : Providing and laying in position plain cement concrete Cum of Mix 1:4:8 with OPC @ 180kgs, with 40mm and down size graded granite metal coarse aggregates @0.85cum and fine aggregates @ 0.57cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2	Cum	0.11	5102.00	571.42
4	18/4.46.3	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications. Specification No. KBS 4.6.3 TMT bars Fe 550	Kg	80.00	71.51	5720.80

AEE (Ele.)

Sl. No	Page no. & item no	Description	Unit	Qty	Rate	Amt(Rs)
5	67/12.9.4	Supply of LED floodlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/clear glass material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/ IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with W System Power consumption. LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have in- house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source. LED Floodlight 150 W, (Item No. - 12.9.4, Page No.67) (PW,P&IWTD- Ele SR 2019-20)	Each	12	10250.00	123000.00
6	5/2.37	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:confirming to latest amendments. 16 sqmm. (Item No. - 2.37, Page No.5) (PW,P&IWTD- Ele SR 2019-20)	Per Mtr	15	188.00	2820.00
7	7/2.5.15	Supplying and drawing Flexible Multicore Cable manufactured with electrolytic grade flexible copper with low conductor confirming to IS:8130-1984 and (Virgin) PVC insulation sheathed suitable for working voltage upto 1100Volts as per IS-694:1990, 3C X 4Sq.mm, (Item No. - 2.5.15, Page No.7) (PW,P&IWTD-Ele SR 2019-20)	Per Mtr	32	100.00	3200.00
8	32/5.49.1	Supplying and fixing of solar lux level street light control switch single phase including suitable capacity contactor 3 KW	Each	6	8400.00	50400.00
9	27/5.17.5	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. 40 Amps DP. (Item No. -5.17.9, Page No.27) (PW,P&IWTD-Ele SR 2019-20)	Each	6	1336.00	8016.00
10	30/5.42.2	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 7tanks treatment with powder coated paint and finally finished with approved colour etc., complete. 16 SWG. (Item No. -5.42.2, Page No.30) (PW,P&IWTD- Ele SR 2019-20)	sq.cms	80000	0.35	28000.00

Sl. No	Page no. & item no	Description	Unit	Qty	Rate	Amt(Rs)
11	30/5.41.1	Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint. 40x40x6mm, (Item No. -5.41.1, Page No.30) (PW,P&IWTD- Ele SR 2019-20)	Per Mtr	24	255.00	6120.00
12	41/6.9.1	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV. 40 MM (Item No. -6.9.1 Page No.41) (PW,P&IWTD- Ele SR 2019-20)	Per Mtr	16	335.00	5360.00
13	40/6.2	Supplying fixing and wiring earth electrode for grounding of lifts, transformers, DG sets etc. using 40mm dia 2.9mm thick 2.5 mtr long GI pipe with GI funnel with mesh and suitable size reducer fixed on the top of the earth electrode. The funnel should be enclosed in a CC chamber of 400x400x400mm with a cast iron cover. The earth electrode shall have staggered holes of 12mm dia and the electrode should be covered 150mm all-round with alternate layers of salt and charcoal from the bottom of the CC chamber. The connection from the electrode is to be established through GI strip using GI bolts and nuts. (Item No. 6.2, Page No. 40) (PW,P&IWTD-Ele SR 2019-20)	No	8	4150.00	33200.00
14	24/5.7.4	Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers. 100 Amps (Item No. -5.7.4, Page No.24) (PW,P&IWTD- Ele SR 2019-20)	Each	12	349.00	4188.00
15	10/3.9	Supplying and fixing hylum plastic sheet 3mm thick with necessary nitches for fixing switches, regulators etc., and fixing on existing wood or metal box using N.F. screws. (Item No. -3.9, Page No.10) (PW,P&IWTD- Ele SR 2019-20)	Sq Cm	15000	0.24	3600.00
16	40/6.4.4	Supplying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975 4 core 16 sqmm (Item No. -6.4.4, Page No.40) (PW,P&IWTD- Ele SR 2019-20)	Mtr	250	150.00	37500.00
17	41/6.5.1	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required. In existing trench/duct. 6 sqmm to 16 sqmm (Item No. -6.5.1, Page No.41) (PW,P&IWTD- Ele SR 2019-20)	Mtr	250	11.88	2970.00
18	41/6.6.2	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7) In soil (hard) (Item No. 6.6.2, Page No.41) (PW,P&IWTD- Ele SR 2019-20)	Mtr	200	102.00	20400.00
19	41/6.6.4	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7) Asphalt cutting (Item No. 6.6.4, Page No.41) (PW,P&IWTD- Ele SR 2019-20)	Mtr	50	113.00	5650.00

AEE (Elo.)

Sl. No	Page no. & item no	Description	Unit	Qty	Rate	Amt(Rs)
20	42/6.10.2	Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers etc.16 sqmm (Item No. 6.10.2, Page No.42) (PW,P&IWTD- Ele SR 2019-20)	Each	4	270.00	1080.00
21	42/6.11.3	Supplying and fixing of heavy duty cable glands suitable for UG cable of 1.1 KV class (metal only) 32mm dia (Item No. 6.11.3, Page No.42) (PW,P&IWTD- Ele SR 2019-20)	Each	8	117.00	936.00
22	63/7.20.2	Supply and laying double walled corrugated (DWC) HDPE Pipe including all necessary connecting Sockets/Couplings/Tees/Bends/End-caps of same materials in existing trench as per IS 14930 part -II suitable for drawing underground cables. 50mm OD / 38mm ID (Item No.7.20.2, Page No.63) (PW,P&IWTD- Ele SR 2014-15)	Mtr	150	151.00	22650.00
23	43/6.17.6	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes. 16 sqmm (Item No. 6.17.6 Page No.43) (PW,P&IWTD- Ele SR 2019-20)	Each	16	12.44	199.04
24	44/6.18.3	Supplying and running GI/Copper conductor for grounding and (along with other wires in conduit system of wiring) using necessary suitable size clamps, nails, guttas/spacers etc. 8 SWG GI Wire (Item No. 6.18.3 Page No.44) (PW,P&IWTD- Ele SR 2019-20)	Mtr	32	19.00	608.00
25	79/14.5	Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires. (Item No. 14.5 Page No.79 (PW,P&IWTD- Ele SR 2019-20)	Each	12	175.00	2100.00
26	13/4.1.1	Fabricating, supplying and erecting swaged **tubular pole** of height ...Mtr having three sections, and providing two coats of red oxide paint and finished with two coats of enamelled paint of approved quality and colour and M.S. base plate of suitable size welded at the bottom of the pole(as per IS) and 40mm dia GI / flexible PVC pipe of 1 mtr length fitted to the heavy gauge polycarbonate control box including 5way connector of size 167x125x82mm for 7.5M pole/200x160x98mm for remaining length of pole with front opening cover, with locking arrangements and suitable capacity MCB / DP switch, The pole shall be erected in cement concrete work (1:2:4) including excavation and refilling of planting depth of the pole to the ground level and the coping CC shall be up to 0.6M above ground level as per IS 2713 - 7. 4.1.1) 9Mt (5Mt Hb,165.1mm dia 4.85mm thick x2M Hm, 139.7mm dia 4.50mm thick x 2M Ht,114.3mm dia 3.65mm thick) as per IS 410 SP 32	Each	16	13200.00	211200.00

Sl. No	Page no. & item no	Description	Unit	Qty	Rate	Amt(Rs)
27	10/4.2.6	Fabricating, supplying and erection of ...Mtrs long hot dip **Galvanized Octagonal pole** with BSEN 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangements, including suitable boards, Bakelite sheet and MCBs as per IS specifications suitable to withstand the wind speed of 47 m/sec for .....Mtrs pole in single section and single joint welded as per IS 9595/IS 10178AWS having dimensions bottom .....mm, top....mm with 3mm thick, suitable base plate and 4Nos of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65micron as per ASTM-A123 and 153 etc., (excluding foundation) as per drawing appended. 4.2.6) 8 meters - Top 70mm and bottom 135mm dia	Each	3	12260.00	36780.00
28	13/14.4.1	Supplying and fixing telescopic M.S. bracket fabricated by using 0.5m length 4" dia telescopic M. S. pipe, with 2" dia 1.5m long M. S. bracket and are welded with suitable angle, using 6mm thick M. S. sheet, grip bolts & nuts, as required, suitable for 9 to 12 Mtrs. M. S. tubular pole, with necessary two coats of painting, with all other accessories. 14.4.1) Single bracket 1.5 Mtr. Length	Each	16	1200.00	19200.00
29	9/12.8	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/Overload, short circuit/ miss-wiring protection. Compatible for pole mouting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency> 130lm/w, nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 2 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED manufacturer & Cree/Nichia/ Lumileds/Osram make LED Source 12.8) LED Streetlight 90 Watts	No	5	7160.00	35800.00
30	7/2.7.1	Wiring for lighting/power circuit using one of PVC insulated 1100V grade, stranded Aluminium wire single core in open or concealed system of wiring. 2.7.1) 4 sqmm	Mtr.	5	9.00	45.00
31	5/2.3.2	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:confirming to latest amendments.1) 1.5 SQMM	Mtr.	90	20.50	1845.00

Technical Sanction for Rs. 11,00,000.00
(Rupees : Eleven lakhs only/-
016-21-008009
is accorded under head PO-300.
Registered at SE (Ele) No. PR/397/21-22 subject to conditions contained in enclosed memo No. SE(Ele)/TS/18/2021-22 Date: 14/9/2021.

JE/AE TA SE (Electrical)

AEE (Ele.)

Sl. No	Page no. & item no	Description	Unit	Qty	Rate	Amt(Rs)
32	16/4.7.1	Supplying, and fixing of Hot dip Galvanized M.S.Bracket suitable for out door luminaries and mounted on Octagonal pole using necessary bolts, nuts etc., complete. Single Arm Bracket with 1000mm Standard 40/50MM dia	Each	8	1689.00	13512.00
		Sub total Part-A				**703352.53**
		Part B, PWD ELECTRICAL SR-2014-15, BESCOM SR-2018-19				
33	56/7.6.1	Supplying and stringing of 1.1KV grade Aerial Bunched Cable Stranded & Compacted Aluminum Phase Conductor, and Stranded Messenger Conductor with all aluminum Alloy, Phase Conductor is insulated with XLPE Compound, insulated Messenger with specified IS-14255:1995 & confirming to GTP of GROUP-A. 1_ 2 X 16 + 1 X 25 SQ.MM	Per Mtr	2200	92.00	202400.00
34	83/07	Suspension Clamp Assembly 16 to 70 mm (Excluding pole clamp & Eye Hook) Bescom SR 2018-19 (material cost + labour charges)	Set No	70	323.00	22610.00
35	83/10	Dead End Clamp/Anchor Clamp Assembly 25 to 95 Sqmm (excluding pole clamps and Eye hook) Bescom SR 2018-19 (material cost + labour charges)	Set No	6	304.00	1824.00
36	83/11	Universal Hook, Bolts & nuts including fixing charges Bescom SR 2018-19 (material cost + labour charges)	No	70	441.00	30870.00
37	83/6	Piercing connector suitable for 16 Sqmm - 95 Sqmm AB Cable - Street Light Connections including fixing charges Bescom SR 2018-19 (material cost + labour charges)	No	70	224.00	15680.00
38	83/8	Supplying and fixing of Pole clamp for LT Cable Bescom SR 2018-19 (material cost + labour charges)	Set No	70	314.00	21980.00
		Sub Total Part -B				**295364.00**
		Sub Total part-A				**703352.53**
		ADD GST 12 % on Part-A				**84402.30**
		Bescom charges, Miscellanious and Roundoff				**16881.17**
		Grand Total				**1100000.00**
Rupees Twenty Three Lakhs Only						

CERTIFICATE :-

1 Certified that this place was inspected by me, this work is essential and prepared this estimate in most economical way of executing the work.

2 The provision made in the estimate are adequate and necessary and the work comes in the BBMP limit and is legitimate Charges on the BBMP funds.

3 This Estimate rates are based on the KPWD Electrical SR-2014-15, 2019-20, BESCOM SR-2018-19 and KPWD Civil SoR-2018-19.

Administrative Sanctioned for Rs. 11,00,000-00.

Rs. Eleven lakhs only ..... is accorded under the head ..... page 52 .....

By EE (Elect) RRN, page 52 & 53.

Registered as EE (Elect)RRN/No. 21/21-22 ..Subject to conditions contained in enclosed memo No. 21/21-22. Date.. 4/9/2021

A.E. (Elect) RRN

EE, (Elect) RRN

Junior Engineer (Ele)
RR Nagara Zone

Asst. Executive Engineer (Ele)
RR Nagara Zone

EXECUTIVE ENGINEER (Ele)
RR Nagara Zone